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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/034,398

12/26/2001

Harry G. Skinner

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09/21/2004

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EXAMINER

ODOM, CURTIS B

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,398

Applicant(s)

SKINNER, HARRY G.

Examiner

Curtis B. Odom

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-12,14-23,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12,14-18,23,25 and 26 is/are allowed.
- 6) ☒ Claim(s) 1,7,9-11,19 and 22 is/are rejected.
- 7) ☒ Claim(s) 2-6,20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-11, 18, 22, and 26 are objected to because of the following informalities:
 - a. In claims 1-11, 18, 22, and 26, "SSC" is suggested to be changed to "spread spectrum clock".
 - b. In claims 9-11, the phrase "claim 8" is suggested to be changed to "claim 1".Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1, 7, 9-11, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fang (previously cited in Office Action 3/4/04).

Regarding claim 1, Fang discloses a system comprising:

 - an interconnect (Fig. 3, element 110);
 - a transmitting chip including a transmitter (column 1, lines 10-21, data processing transmission system) to produce a multiple frequency data signal to the interconnect in response

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to a multiple-frequency transmitting clock signal (Fig. 2, column 3, line 50-column 4, line 2);
and

a receiving chip (Fig. 3) coupled to the transmitting chip through the interconnect, the receiving chip including:

clock recovery circuitry (Fig. 3, column 4, line 3-column 5, line 43) to receive the multiple frequency data signal (Fig. 3, element 110) and reference clock signal (Fig. 3, block 311) and in response thereto to produce an in phase clock signal (Fig. 3, element 160) which is in phase with the multiple frequency data signal and mirrors frequency changes in the multiple frequency data signal, wherein the multiple frequency data signal has embedded clock information (Fig. 2, column 3, line 61-column 4, line 2) and a varying frequency (column 7, lines 24-27), wherein multiple frequency data is data of varying frequency; and

a receiving gate (Fig. 1, block 340) to receive the multiple frequency data signal and the in phase clock signal and to gate the multiple frequency data signal in response to the in phase clock signal, wherein the output of the pulse generator which is inputted to the gate is simply a different form of the multiple frequency input data signal.

Fang does not disclose the multiple frequency data signal is a spread spectrum signal. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that a multiple frequency signal is a type of spread spectrum signal. Frequency hopping signals are spread spectrum signals comprised of multiple frequencies contained in one data signal. Therefore, it would have been obvious to one skilled in the art that the multiple-frequency signal of Fang could have been a spread spectrum signal. Thus, claim 1, does not constitute patentability.

Regarding claim 7, which inherits the limitations of claim 1, Fang discloses a local reference source (Fig. 3, block 311, column 4, lines 2-23) to produce the reference clock signal, wherein the clock signal has a constant frequency (column 1, lines 19-21), wherein the oscillator signal has a constant frequency.

Regarding claim 9, which inherits the limitations of claim 1, Fang discloses a local reference source (Fig. 3, block 314) to produce the reference clock signal, wherein the clock signal has a constant frequency (wherein the oscillator signal of Fang has a constant frequency), but does not disclose the local reference source is external to the circuit. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the reference source could have been external to the circuit. An oscillator external to the circuit could have been used to produce a reference signal. Oscillators are well known in the art and thus having the reference source external to the circuit does not constitute patentability.

Regarding claim 10, which inherits the limitations of claim 1, Fang does not disclose the system is included in a computer system. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the circuit in a computer system in order to synchronize transmission and reception circuits in the computer.

Regarding claim 11, which inherits the limitations of claim 1, Fang discloses the system is included in a communication system (column 1, lines 5-8).

Regarding claims 19 and 22, the claimed device includes features corresponding with the subject matter mentioned in the above rejection of claim 1 which is applicable hereto.

Allowable Subject Matter

4. Claims 12, 14-18, 23, 25, and 26 are allowable over prior art references because related references do not disclose a clock recovery system receiving a spread spectrum signal including a receiving gate to receive a data signal and an in phase clock signal and to gate the data signal to produce a gated data signal in response to the in phase clock signal, a phase detector to receive the gated data signal and in response thereto to produce a phase information signal, mirroring circuitry to receive the gated data signal and the reference clock signal and in response thereto to produce a frequency mirrored clock signal that mirrors frequency changes in the data signal, and a phase interpolator to receive the phase information signal and the frequency mirrored and in response thereto to produce the in phase clock signal.

5. Claims 2-6, 20, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom


STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000

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September 13, 2004